

INTERNSHIP: Lead a project to reduce metal scrap waste and improve energy efficiency. (Summer 2020)
COMPANY: Bosch Automotive Service Solutions

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior- or senior-level college student to lead a project focused on reducing metal scrap waste and improving energy efficiency at Bosch Automotive Service Solutions in Owatonna, MN. Bosch is a manufacturer of custom automotive tools, equipment, and mechanical parts. The intern will work with MnTAP and Bosch staff to establish recommendations towards metal scrap reduction and energy efficiency. Data collection and analysis will be utilized in order to determine and propose solutions for these opportunities. The intern will draft a report for Bosch management detailing the project findings and outlining base plans for implementation, with consideration given to savings opportunities, ROI, environmental impacts, and other benefits.

JOB DUTIES:

As part of this project, you will be asked to complete the following tasks:

1. Develop a high level understanding of facility manufacturing processes, including material in-flows and out-flows, utility usages, and wastes.
2. Investigate processes that result in metal scrap wastes, analyze data provided by Bosch staff, and collect any additional information where necessary to estimate the scope of potential scrap reduction.
3. Research and establish possible opportunities and collaborate with Bosch staff to investigate feasibility of identified changes to procedures, designs, or equipment.
4. Benchmark energy use in the facility and evaluate shutdown procedures and controls on equipment, with an initial focus on optimizing workstation cooling fans.
5. As time allows, provide technical support for additional waste reduction projects including water reuse/conservation in the electroplating process, research of alternative coolants for process equipment, or other opportunities as prioritized by the onsite supervisor.
6. Work with Bosch staff to guide overall development of resources towards implementation of recommendations.
7. Estimate reduction or diversion potential and costs associated with implementation of a recommended reduction opportunity, and prioritize suggested changes using simple payback methods to financially justify the alternative processes or equipment.
8. As appropriate, initiate any approved changes or system upgrades and estimate the performance of these changes.
9. Summarize findings in a poster, executive summary, and a detailed final report, which will include recommended procedures and vendor proposals along with an economic analysis and justification of changes.
10. Present project findings to company staff, as well as at MnTAP-hosted public presentation events.

As an intern, you will work at the company and report back to MnTAP. The position is full time, 40 hours per week, for three months to start after the conclusion of spring semester or quarter. Pay is \$14/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$16.00/hour when averaged over the project. Candidates must pass a background check.

QUALIFICATIONS:

- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background
- Troubleshooting skills
- Self-motivated
- Excel and other software skills
- Appropriate majors: *Engineering, environmental or physical sciences and others as applicable*

TO APPLY:

Apply online at:

www.mntap.umn.edu/intern/student_apply.htm

Remember to submit your application form, cover letter, resume, and unofficial transcript.

Cover letters can be addressed to:

Nathan Landwehr, Intern Program Administrator
200 Oak Street SE, Suite 350-1
Minneapolis, MN 55455 • landwehr@umn.edu

MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY